



## RADIATION

### Agent Overview:

People are exposed to small amounts of radiation every day, both from naturally occurring sources, man-made sources, electronic equipment, medical sources, and from nuclear weapons testing. A radiation emergency, such as a nuclear power plant accident or a terrorist event, could expose people to small or large doses of radiation. Release of radioactive materials can contaminate air, water, surfaces, soil, plants, buildings, people, or animals in the form of dust, powder, liquid, or a gas when deposited on an object. Exposure occurs when radioactive waves or particles penetrate the body. A person exposed to radiation is not necessarily contaminated with radioactive material. An uncontaminated person can be exposed by being too close to radioactive material or a contaminated person, place, or thing.

Radiation can affect the body in a number of ways. The adverse health effects of exposure may not be apparent for many years and can range from mild effects, such as skin reddening, to serious effects, such as cancer and death, depending on the amount of radiation absorbed by the body, the type of radiation, the route of exposure, and the length of time a person was exposed. Exposure to very large doses of radiation may cause death within a few days or months. Exposure to lower doses of radiation may lead to an increased risk of developing cancer or other adverse health effects later in life.

### Lab Specimen Submittal:

Authorization for laboratory specimen submittal must be given through DEMA. Radiological testing is not performed at State of Delaware laboratories.

### Type of Specimens

Urine: Initial and subsequent 24-hour collection.

### Necessary for Testing:

Fecal sample: Collect for first 72 hours.

Whole blood: 10cc blood for complete blood count and differential AND 10cc blood in sterile heparinized tube (radiation cytogenetics).

Swabs: Sample internal, wound, intact skin, and body orifices.

Debris: Collect in labeled tube or container.

Wounds or fluids: Collect in labeled container or tube.

### Packaging Instructions:

Consult Haz/Med Consultants for further direction.

### Transporting Specimens to DEMA:

Contact DEMA for transport of authorized specimens. Submitter must present ID and have proper forms completed. DEMA will coordinate shipping specimens to Teledyne for testing.

### Handling of Specimens:

Follow chain of custody procedures.

### Reporting Results:

Teledyne or reference laboratory will notify DEMA as soon as possible.

### Contact Information:

DEMA Director: Jamie Turner, (302) 247-4773 (Pager, 24/7 coverage)